

REMARKS

The official action of July 16, 2002, has been carefully considered. Claim 1 has been cancelled. Claim 5 has been rewritten in amended and independent form. Claims 19-21 have been cancelled. New Claims 22-27 have been added, Claims 2-18 and 22-27 are now in the application, Claims 2 and 5 being in independent form.

Claims 2 and 5 were rejected over the Francois reference in view of the Anderson reference under 35 U.S.C. § 103(a). For the reasons hereinafter set out, applicants respectfully request reconsideration of those rejections.

Regarding Claim 2, the Francois reference discloses a composite torsion tube for use in vehicle suspension systems or the like. It calls for successive plies arranged in alternating relationship with filaments at equal but opposite angles to the tube axis. (Col. 2, lines 14-20)

It does not teach or suggest: the combination of first, second and third sets of fibers wherein the fibers of the first set are oriented at $0^\circ \pm 15^\circ$ with respect to the axis, wherein the fibers of the second set are oriented at $+45^\circ \pm 15^\circ$ with respect to the axis, and wherein the fibers of the third set are oriented at $-45^\circ \pm 15^\circ$ with respect to the axis. It does not teach or suggest the use of first and second metallic arms secured to the ends of a rod, much less such a rod.

The Anderson patent may suggest that a stabilizer bar rod can be made of any material. However, it does not teach or suggest the specific materials or material arrangement claimed. The statement or suggestion that an element can be made from any suitable material does not constitute a teaching that a specific material or arrangement of materials should be used. If that was the case, virtually no invention would be patentable.

Regarding Claim 5, the Anderson patent shows a stabilizer bar wherein the rod is a tubular member which "could be made from a variety of materials but (is) preferably made from manganese steel alloys". (Col. 2, lines 62-64). There is no teaching or suggestion that it be made specifically from "a fiber reinforced composite". Neither the Francois reference nor the Anderson reference teaches or suggests a tubular rod seated at opposite ends in recesses formed in first or second arms, with "first and second plugs positioned within the first and second rod ends within the first and second

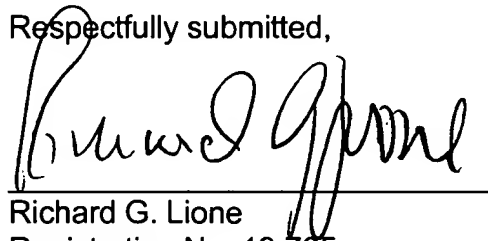
recesses". As such, the two references fail to teach or suggest the claimed structure, even when combined.

Claims 2 and 5 each define subject matter which the cited prior art simply neither teaches nor suggests, no matter how combined. The hypothetical skilled practitioner of the art cannot, under the Federal Circuit's oft repeated pronouncements, be relied upon to supply the suggestions which would be required — they must plainly be in the prior art itself. As such, these claims should be allowed.

The remaining claims in the application all depend from either Claim 2 or Claim 5, directly or indirectly. Accordingly, they should also be allowable. Furthermore, each additionally recites a specific feature or features of the invention not remotely suggested by the cited prior art.

Favorable consideration of all remaining claims is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Richard G. Lione", written over a horizontal line.

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APPENDIX A

IN THE CLAIMS

Claims 1, 19-21 have been canceled.

Claims 3-18 have been amended as follows:

3. (Amended) The [invention] stabilizer bar of Claim [1 or] 2 wherein the arms each comprise a light-metal alloy.

4. (Amended) The [invention] stabilizer bar of Claim [1 or] 2 further comprising:

first and second clamps positioned at least partially around the first and second rod ends respectively, said first and second clamps positioned to abut the first and second arms, respectively, to limit axial movement of the rod with respect to the clamps.

5. (Amended) A stabilizer bar comprising:
a fiber reinforced composite rod having a tubular configuration and
including a plurality of fibers embedded in a resin binder, said rod having first and
second open ends;

first and second arms, each arm comprising a respective recess, each of
said recesses receiving one of said rod ends; and

[The invention of Claim 1 wherein the rod is tubular, further comprising]
first and second plugs positioned within the first and second rod ends within the first and second recesses, respectively.

6. (Amended) The [invention] stabilizer bar of Claim 5 wherein the first and second plugs are integrally connected to the first and second arms, respectively.

7. (Amended) The [invention] stabilizer bar of Claim 5 wherein the arms are crimped over the respective rod ends to secure the arms to the rod.

8. (Amended) The [invention] stabilizer bar of Claim [1] 5 wherein the composite rod comprises a longitudinal axis, wherein the fibers comprise first, second and third sets of fibers, wherein the fibers of the first set are oriented at $0^\circ \pm 15^\circ$ with respect to the axis, wherein the fibers of the second set are oriented at $+45^\circ \pm 15^\circ$ with respect to the axis, and wherein the fibers of the third set are oriented at $-45^\circ \pm 15^\circ$ with respect to the axis.

9. (Amended) The [invention] stabilizer bar of Claim 8 or 2 wherein the fibers of the first, second, and third sets comprise more than 50% of all of the fibers in the composite rod.

10. (Amended) The [invention] stabilizer bar of Claim 8 or 2 wherein the fibers of the first, second, and third sets comprise more than 75% of all of the fibers in the composite rod.

11. (Amended) The [invention] stabilizer bar of Claim 8 or 2 wherein the fibers of the first, second, and third sets comprise more than 95% of all of the fibers in the composite rod.

12. (Amended) The [invention] stabilizer bar of Claim [1] 5 wherein the composite rod comprises a longitudinal axis, wherein the fibers comprise first, second and third sets of fibers, wherein the fibers of the first set are oriented at $0^\circ \pm 10^\circ$ with respect to the axis, wherein the fibers of the second set are oriented at $+45^\circ \pm 10^\circ$ with respect to the axis, and wherein the fibers of the third set are oriented at $-45^\circ \pm 10^\circ$ with respect to the axis.

13. (Amended) The [invention] stabilizer bar of Claim [1] 5 wherein the composite rod comprises a longitudinal axis, wherein the fibers comprise first, second and third sets of fibers, wherein the fibers of the first set are oriented at $0^\circ \pm 5^\circ$ with respect to the axis, wherein the fibers of the second set are oriented at $+45^\circ \pm 5^\circ$ with

respect to the axis, and wherein the fibers of the third set are oriented at $-45^{\circ} \pm 5^{\circ}$ with respect to the axis.

14. (Amended) The [invention] stabilizer bar of [Claim 1 or 2] Claims 2 or 5 wherein the fibers comprise carbon fibers.

15. (Amended) The [invention] stabilizer bar of [Claim 1 or 2] Claims 2 or 5 wherein the arms are each tapered from a larger cross-sectional area to a smaller cross-sectional area, said larger cross-sectional area disposed between the rod and the smaller cross-sectional area.

16. (Amended) The [invention] stabilizer bar of [Claim 1 or 2] Claims 2 or 5 wherein the rod is tubular in shape.

17. (Amended) The [invention] stabilizer bar of Claim 2 wherein the fibers of the first set are oriented $0^{\circ} \pm 10^{\circ}$ with respect to the axis, wherein the fibers of the second set are oriented at $+45^{\circ} \pm 10^{\circ}$ with respect to the axis, and wherein the fibers of the third set are oriented at $-45^{\circ} \pm 10^{\circ}$ with respect to the axis.

18. (Amended) The [invention] stabilizer bar of Claim 2 wherein the fibers of the first set are oriented $0^{\circ} \pm 5^{\circ}$ with respect to the axis, wherein the fibers of the second set are oriented at $+45^{\circ} \pm 5^{\circ}$ with respect to the axis, and wherein the fibers of the third set are oriented at $-45^{\circ} \pm 5^{\circ}$ with respect to the axis.

New Claims 22-27 have been added as follows:

22. (New) The stabilizer bar of Claim 9 wherein the fibers of the first, second and third sets lie in successive layers.

23. (New) The stabilizer bar of Claim 22 wherein the successive layers of fibers are arranged in the aforescribed pattern from inside to outside of the rod.

24. (New) The stabilizer bar of Claim 10 wherein the fibers of the first, second and third sets lie in successive layers.

25. (New) The stabilizer bar of Claim 24 wherein the successive layers of fibers are arranged in the aforescribed pattern from inside to outside of the rod.

26. (New) The stabilizer bar of Claim 11 wherein the fibers of the first, second and third sets lie in successive layers.

27. (New) The stabilizer bar of Claim 26 wherein the successive layers of fibers are arranged in the aforescribed pattern from inside to outside of the rod.